UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,788	11/14/2001	Bruce M. Russell	IR 6555-00	5839

7590 02/13/2004

COLGATE-PALMOLIVE COMPANY
909 River Road
P.O. Box 1343
Piscataway, NJ 08855-1343

EXAMINER	
BALSIS, SHAY L	
ART UNIT	**PAPER NUMBER**
1744	

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/992,788	RUSSELL ET AL.	
	Examiner	Art Unit	
	Shay L Balsis	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) *11-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-25* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 November 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/13/02, 8/22/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I in response dated 12/4/03 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The restriction requirement has been reviewed and is still deemed proper and is therefore made FINAL.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the three preformed components are welded together as in claim 7 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Russell et al. (USPN 6220673).

Russell teaches a toothbrush manufactured from two preformed components (14, 16), which are welded together (20) to form a toothbrush. The preformed components are a neck and a handle. The material used for the toothbrush head is a thermoplastic elastomer (col. 5, lines 5-18).

5. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kramer (USPN 6066282).

Kramer teaches a toothbrush manufactured from two preformed components (1, 7), which are welded together to form a toothbrush (col. 2, lines 58-68). The preformed components are a neck and a handle. An elastomeric material to form a gripping means surrounds the handle.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell et al. in view of Gartland et al. (USPN 6682620).

Russell teaches all the essential elements of the claimed invention however fails to teach a specific break strength of the weld. Gartland teaches a method of welding thermoset plastic monofilament fabric to provide a continuous method of treating the monofilament fabric. Gartland teaches that the thermoset plastic monofilament fabric have a weld strength of 465 lbs/in (col. 8, lines 45-50). Since Gartland is welding plastic monofilament fibers together and creating a strong weld strength, it would have been obvious to one of ordinary skill in the art at

the time the invention was made that break strength of Russell's weld is at least at least 465 lbs/in, if not stronger since Russell is welding solid plastic/elastomeric components instead of fibers.

8. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer in view of Gartland et al. (USPN 6682620).

Kramer teaches all the essential elements of the claimed invention however fails to teach a specific break strength of the weld. Gartland teaches a method of welding thermoset plastic monofilament fabric to provide a continuous method of treating the monofilament fabric. Gartland teaches that the thermoset plastic monofilament fabric have a weld strength of 465 lbs/in (col. 8, lines 45-50). Since Gartland is welding plastic monofilament fibers together and creating a strong weld strength, it would have been obvious to one of ordinary skill in the art at the time the invention was made that break strength of Kramer's weld is at least at least 465 lbs/in, if not stronger since Kramer is using solid plastic/elastic components instead of fibers.

9. Claims 1 and 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bonfiglio (EP 0557537) in view of Russell et al.

Bonfiglio teaches a method of welding plastics such as thermoplastics comprising an application of direct heat to the surfaces to be welded while pressing the surfaces together. The surfaces are heated by use of a hot air or gas blower. Bonfiglio teaches all the essential elements however fails to teach that the welding method is used specifically for toothbrushes. Russell teaches ultrasonic joining of toothbrush heads and handles, wherein the handles are made of a thermoplastic material. It would have been obvious to use the method of hot air welding on Russell's thermoplastic toothbrush because ultrasonic welding requires expensive apparatus' and

the method of welding by means of hot air is inexpensive and does not distort the aesthetic appearance of the components.

10. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonfiglio in view of Yates (USPN 759490).

Bonfiglio teaches a method of welding plastics such as thermoplastics comprising an application of direct heat to the surfaces to be welded while pressing the surfaces together. The surfaces are heated by use of a hot air or gas blower. Bonfiglio teaches all the essential elements however fails to teach that the welding method is used specifically for toothbrushes. Yates teaches a toothbrush with three parts, a head, a neck and a handle. The neck is an elastomeric material to allow for a flexible head. Yates teaches that the three parts maybe joined or united in any well-known manner. It would have been obvious to use the method of hot air welding on Yates' toothbrush to connect the three parts because welding by means of hot air is inexpensive and creates a secure joint.

11. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell et al.

Russell teaches a toothbrush formed from two preformed components, a handle and a head. The head is made from a less rigid thermoplastic polypropylene material having a flexural modulus of from about 100,000 to about 200,000 psi. The handle is more rigid thermoplastic polypropylene material with a flexural modulus of 216,000 to 275,000 psi. Dow.com provides information regarding various polypropylene resins. From the information provided, a polypropylene (C702-20) with a flexural modulus of 150,000 has a melt flow rate of 18.0 g/10mins. A polypropylene (H7000-12NA) with a flexural modulus of 245,000 has a melt flow

rate of 12.0 g/10mins. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use these two polypropylene's as the material for the toothbrush components since the flexural modulus' fall within the specified ranges. With the use of these two polypropylene's it is clear that the melt flow rates of Russell's components differ by more than 5g/min.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L Balsis whose telephone number is 571-272-1268. The examiner can normally be reached on 7:30-5:00 M-Th, alternating F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Warden can be reached on 571-272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Slb
1/30/04

Robert J. Warden Sr.

ROBERT J. WARDEN, SR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700